AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Applicant has made a good faith effort to list each and every prior claim, including any amendments or changes thereto (or status thereof) in this "Listing" section, however, should there be any discrepancy between the previous version of a claim (or status thereof) and the listing not explicitly amended, canceled or otherwise changed by this amendment, only the previous version (and status thereof) should be referred to as the intent of the Applicant.

Listing of the Claims:

1-9. (Canceled)

10. (Previously presented) A system of managing a configuration database within a network management program for a SONET ring network, the system comprising:

a plurality of managed objects representing logical representations of network entities that can be configured and modified through transactions executed by the network management program, wherein one or more of the managed objects include an object reference and a storage location pointer to another of the managed objects, the another of the managed objects being accessed by a combination of the object reference and the storage location pointer associated with the one or more of the managed objects;

an agent process that receives transaction commands from a command handler;

a database manager that receives the transaction commands from the agent process;

a database file that stores commands from the database manager; and

a transaction log file that stores actions included within transactions issued by the database manager.

11. (Currently Amended) The system of claim 10, wherein ~~wherein~~ logical dependencies among each of the managed objects are maintained through the linking of the storage location pointers in the managed objects.

12. (Previously presented) The system of claim 11, wherein actions that modify the managed objects are stored in the database file and the transaction log file.

13. (Previously presented) The system of claim 12, wherein, in the event of an abort condition, a most recent configuration state of the network is restored by re-applying the transactions stored in the transaction log file, and resolving the pointer links contained in affected ones of the managed objects.

14. (Previously presented) The system of claim 12, further comprising a free space list maintained by the database manager, the free space list containing record number and size information for the managed objects that have been deleted and are available for use.

15. (Previously presented) The system of claim 14, wherein a present state of the managed objects is stored in a memory buffer upon modification by one or more the actions comprising one of the transactions.

16. (Previously presented) An apparatus for managing a configuration database within a network management program for a computer network, the apparatus comprising:

a loader module for loading a plurality of managed objects into system memory of the computer network upon a start-up event of the computer network

wherein a first one of the managed objects includes object reference information and pointer information in order to access at least a second one of the managed transactions;

an agent process for creating new transactions or opening existing transactions affecting one or more of the managed objects modified by the transactions, ;

a transaction saving module for saving the loaded transactions in non-volatile memory; and

a recovery module for restoring previous transactions executed prior to a failure condition.

17. (Previously presented) The apparatus of claim 16, further comprising a memory map storing the object reference information and the pointer information for each of the managed objects.

18. (Previously presented) The apparatus of claim 17, wherein the computer network comprises a parallel ring network including a first working network and a second standby network coupling each network element in the network.

19. (Previously presented) The apparatus of claim 18, wherein the agent process comprises one of an alarm manager process, an automatic protection process, and a configuration manager program.

20. (Previously presented) The apparatus of claim 19, wherein the computer network is a SONET ring network, and the managed objects comprise portions of control cards within nodes of the computer network.

21. (Previously presented) The system of claim 10, wherein the one of more of the managed objects is accessed through direct links through the another of the managed objects.

22. (Previously presented) The apparatus of claim 16, wherein the at least second one of the managed objects is accessed through direct links through the at least the first one of the managed objects.

23. (Previously presented) A system of managing a configuration database within a network management program for a SONET ring network including an active network coupled in parallel to a standby network, the system comprising:

a plurality of managed objects representing logical representations of network entities that can be configured and modified through transactions executed by the network management program, wherein at least a first one of the managed objects includes object reference information and pointer information in order to access at least a second one of the managed transactions;

an agent process that receives transaction commands from a command handler;

a database manager that receives the transaction commands from the agent process;

a database file that stores commands from the database manager in the active network;

a transaction log file that stores actions included within transactions issued by the database manager; and

a synchronization manager that writes the actions included within the transactions to a synchronization database stored on the standby network.

24. (Previously presented) The system of claim 23, wherein each managed object includes an object reference key and a storage location pointer and wherein logical dependencies among objects are maintained through the linking of storage location pointers in the managed objects.

25. (Previously presented) The system of claim 24, wherein actions that modify the managed objects are stored in the database file and the transaction log file.

26. (Previously presented) The system of claim 25, wherein, in the event of an abort condition, the most recent configuration state of the network is restored by re-applying the transactions stored in the transaction log file, and resolving the pointer links contained in the affected managed objects.

27. (Previously presented) The system of claim 25, further comprising a free space list maintained by the database manager, the free space list containing record number and size information for the managed objects that have been deleted and are available for use.

28. (Previously presented) The system of claim 27, wherein the present state of the managed objects on the active network is stored in a memory buffer upon modification by one or more the actions comprising one of the transactions.

29. (Previously presented) The system of claim 28, wherein the present state of managed objects on the standby network are updated by the synchronization manager upon occurrence of a failure condition of the active network.

30. (Previously presented) The system of claim 23, wherein the at least second one of the managed objects is accessed through direct links through the at least the first one of the managed objects.